1 Information filtering and query indexing for an information retrieval m

Christos Tryfonopoulos, Manolis Koubarakis, Yannis Drougas

February 2009 **Transactions on Information Systems (TOIS)** , Volume 27

Publisher: ACM

Full text available: Pdf (1.23 MB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 126, Downloads (12 Months): 266, Citat

In the information filtering paradigm, clients subscribe to a server with or profiles that express their information needs. Clients can also publish servers. Whenever a document is published, the continuous queries sati

Keywords: Information filtering, performance evaluation, query indexi selective dissemination of information

2 Efficient IP table lookup via adaptive stratified trees with selective re

Marco Pellegrini, Giordano Fusco

June 2008 **Journal of Experimental Algorithmics (JEA)** , Volume 12

Publisher: ACM

Full text available: Pdf (218.61 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 213, Citatior

IP address lookup is a critical operation for high-bandwidth routers in pa networks, such as Internet. The lookup is a nontrivial operation, since it searching for the longest prefix, among those stored in a (large) given t

Keywords: IP table lookup, data structures

3 Efficient simulation of Internet worms

David M. Nicol

April 2008 **Transactions on Modeling and Computer Simulation (TOM** Issue 2

Publisher: ACM

Full text available: Pdf (616.44 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 21, Downloads (12 Months): 307, Citatic

Simulation of Internet worms (and other malware) requires tremendous resources when every packet generated by the phenomena is modeled i the other hand, models of worm growth based on differential equations significant ...

Keywords: Worms, denial-of-service, modeling, simulation

4 High-performance packet classification algorithm for multithreaded I processor

Duo Liu, Zheng Chen, Bei Hua, Nenghai Yu, Xinan Tang

February 2008 **Transactions on Embedded Computing Systems (TECS)**

Publisher: ACM

Full text available: Pdf (1.17 MB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 12, Downloads (12 Months): 174, Citatic

Packet classification is crucial for the Internet to provide more value-ad guaranteed quality of service. Besides hardware-based solutions, many classification algorithms have been proposed. However, classifying at 1(

Keywords: Network processor, architecture, embedded system design, packet classification, thread-level parallelism

5 P-ring: an efficient and robust P2P range index structure

Adina Crainiceanu, Prakash Linga, Ashwin Machanavajjhala, Johannes Gehr Shanmugasundaram

June 2007 **SIGMOD '07:** Proceedings of the 2007 ACM SIGMOD internatior Management of data

Publisher: ACM

Full text available: Pdf (410.43 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 145, Citatior

Peer-to-peer systems have emerged as a robust, scalable and decentral and publish data. In this paper, we propose P-Ring, a new P2P index str supports both equality and range queries. P-Ring is fault-tolerant, provi

Keywords: load balancing, peer-to-peer systems, range queries

6 CAMP: fast and efficient IP lookup architecture

Sailesh Kumar, Michela Becchi, Patrick Crowley, Jonathan Turner

December 2006 **ANCS '06:** Proceedings of the 2006 ACM/IEEE symposium networking and communications systems

Publisher: ACM

Full text available: Pdf (636.29 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 48, Citation

A large body of research literature has focused on improving the perforr prefix match IP-lookup. More recently, embedded memory based archit proposed, which delivers very high lookup and update throughput. Thes

Keywords: IP lookup, internet router, longest prefix match

7 High-performance packet classification algorithm for many-core and network processor

Duo Liu, Bei Hua, Xianghui Hu, Xinan Tang

October 2006 **CASES '06:** Proceedings of the 2006 international conference architecture and synthesis for embedded systems

Publisher: ACM

Full text available: Pdf (1.14 MB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 103, Citatior

Packet classification is crucial for the Internet to provide more value-ad guaranteed quality of service. Besides hardware-based solutions, many classification algorithms have been proposed. However, classifying at 1(

Keywords: architecture, embedded system design, multithreading, net packet classification, thread-level parallelism

8 A TCAM-based distributed parallel IP lookup scheme and performan

Kai Zheng, Chengchen Hu, Hongbin Lu, Bin Liu

August 2006 **IEEE/ ACM Transactions on Networking (TON)** , Volume 14 I

Publisher: IEEE Press

Full text available: Pdf (883.08 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 5, Downloads (12 Months): 89, Citation

Using ternary content addressable memory (TCAM) for high-speed IP ac been gaining popularity due to its deterministic high performance. Howe the slow improvement of memory accessing speed, the route lookup en

Keywords: IP, TCAM, power consumption, route lookup, throughput

9 Chisel: A Storage-efficient, Collision-free Hash-based Network Proce Architecture

Jahangir Hasan, Srihari Cadambi, Venkatta Jakkula, Srimat Chakradhar

June 2006 **ISCA '06:** Proceedings of the 33rd annual international symposi Architecture

Publisher: ACM

Full text available: Pdf (450.93 KB) Additional Information: full citation, abstract, referer terms

Bibliometrics: Downloads (6 Weeks): 12, Downloads (12 Months): 83, Citatior

Longest Prefix Matching (LPM) is a fundamental part of various network Previously proposed approaches for LPM result in prohibitive cost and p (TCAMs) or in large memory requirements and long lookup latencies (tr

Keywords: IP Lookup, Packet Classification, Hash Tables, Bloom Filters Matching.

Also published in:
May 2006 **SIGARCH Computer Architecture News** Volume 34 Issue 2

10 Longest prefix matching using bloom filters
Sarang Dharmapurikar, Praveen Krishnamurthy, David E. Taylor
April 2006 **IEEE/ ACM Transactions on Networking (TON)** , Volume 14 Issu
Publisher: IEEE Press
Full text available: Pdf (487.30 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 78, Citation

We introduce the first algorithm that we are aware of to employ Bloom prefix matching (LPM). The algorithm performs parallel queries on Bloor efficient data structure for membership queries, in order to determine a

Keywords: Bloom filter, IP lookup, computer networking, longest prefi

11 Adaptive data structures for IP lookups
Ioannis Ioannidis, Ananth Grama, Mikhail Atallah
December 2005 **Journal of Experimental Algorithmics (JEA)** , Volume 10
Publisher: ACM
Full text available: Pdf (258.90 KB) Additional Information: full citation, appendices and abstract, references, index t

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 84, Citation

The problem of efficient data structures for IP lookups has been well stu literature. Techniques such as LC tries and extensible hashing are comm paper, we address the problem of generalizing LC tries, based on traces

Keywords: IP lookups, level compression

12 Overcoming the memory wall in packet processing: hammers or lad
Jayaram Mudigonda, Harrick M. Vin, Raj Yavatkar
October 2005 **ANCS '05:** Proceedings of the 2005 ACM symposium on Arch networking and communications systems
Publisher: ACM
Full text available: Pdf (207.39 KB) Additional Information: full citation, abstract, referer terms

Bibliometrics: Downloads (6 Weeks): 19, Downloads (12 Months): 69, Citatior

Overhead of memory accesses limits the performance of packet process To overcome this bottleneck, today's network processors can utilize a w mechanisms-such as multi-level memory hierarchy, wide-word accesses purpose ...

Keywords: data-caches, multithreading, network processors

13 Hardware-based IP routing using partitioned lookup table
Mohammad J. Akhbarizadeh, Mehrdad Nourani
August 2005 **IEEE/ ACM Transactions on Networking (TON)** , Volume 13 I

Publisher: IEEE Press

Full text available: Pdf (580.38 KB) Additional Information: full citation, abstract, referer terms

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 64, Citation

We present a search algorithm implementable by a parallel architecture partitioned forwarding table. This scheme effectively reduces the compl "the longest prefix match" problem to "a prefix match" problem. The m

Keywords: IP address, content addressable memory, forwarding table, longest prefix matching, partitioned forwarding

14 Scalable, memory efficient, high-speed IP lookup algorithms
Rama Sangireddy, Natsuhiko Futamura, Srinivas Aluru, Arun K. Somani
August 2005 **IEEE/ ACM Transactions on Networking (TON)** , Volume 13 I
Publisher: IEEE Press

Full text available: Pdf (699.74 KB) Additional Information: full citation, abstract, referer terms

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 92, Citation

One of the central issues in router performance is IP address lookup bas prefix matching. IP address lookup algorithms can be evaluated on a nu lookup time, update time, memory usage, and to a less important exter

Keywords: IP packet forwarding, address lookups, longest prefix matcl tables, scalability

15 Fast incremental updates for pipelined forwarding engines
Anindya Basu, Girija Narlikar
June 2005 **IEEE/ ACM Transactions on Networking (TON)** , Volume 13 Issu
Publisher: IEEE Press

Full text available: Pdf (941.54 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 49, Citation

Pipelined ASIC architectures are increasingly being used in forwarding e speed IP routers. We explore optimization issues in the design of memo structures that support fast incremental updates in such forwarding eng

Keywords: core routers, packet forwarding, pipelined IP lookup, route

16 A Tree Based Router Search Engine Architecture with Single Port M
Florin Baboescu, Dean M. Tullsen, Grigore Rosu, Sumeet Singh
June 2005 **ISCA '05:** Proceedings of the 32nd annual international sympos Architecture
Publisher: ACM

Full text available: Pdf (293.29 KB) Additional Information: full citation, abstract, referer terms

Bibliometrics: Downloads (6 Weeks): 12, Downloads (12 Months): 62, Citatior

Pipelined forwarding engines are used in core routers to meet speed der based searches are pipelined across a number of stages to achieve high this results in unevenly distributed memory. To address this imbalance,

Also published in:
May 2005 **SIGARCH Computer Architecture News** Volume 33 Issue 2

17 Scalable packet classification
Florin Baboescu, George Varghese
February 2005 **IEEE/ ACM Transactions on Networking (TON)** , Volume 13
Publisher: IEEE Press
Full text available: Pdf (501.73 KB) Additional Information: full citation, abstract, referer terms, review

Bibliometrics: Downloads (6 Weeks): 5, Downloads (12 Months): 82, Citation

Packet classification is important for applications such as firewalls, intru and differentiated services. Existing algorithms for packet classification literature scale poorly in either time or space as filter databases ...

18 Processing XML streams with deterministic automata and stream inc
Todd J. Green, Ashish Gupta, Gerome Miklau, Makoto Onizuka, Dan Suciu
December 2004 **Transactions on Database Systems (TODS)** , Volume 29 I
Publisher: ACM
Full text available: Pdf (717.00 KB) Additional Information: full citation, appendices and abstract, references, cited b

Bibliometrics: Downloads (6 Weeks): 20, Downloads (12 Months): 161, Citatic

We consider the problem of evaluating a large number of XPath express of XML packets. We contribute two novel techniques. The first is to use Deterministic Finite Automaton (DFA). The contribution here is to show

Keywords: XML processing, stream processing

19 Parallelism versus memory allocation in pipelined router forwarding e
Fan Chung, Ronald Graham, George Varghese
June 2004 **SPAA '04:** Proceedings of the sixteenth annual ACM symposium algorithms and architectures
Publisher: ACM
Full text available: Pdf (194.18 KB) Additional Information: full citation, abstract, referer terms

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 21, Citation

A crucial problem that needs to be solved is the allocation of memory tc pipeline. Ideally, the processor memories should be totally separate (i.e memories) in order to minimize contention; however, this minimizes me

Keywords: approximation algorithm, memory allocation

20 Tree bitmap: hardware/software IP lookups with incremental updates
Will Eatherton, George Varghese, Zubin Dittia
April 2004 **SIGCOMM Computer Communication Review** , Volume 34 Issue

Publisher: ACM

Full text available: Pdf (189.39 KB) Additional Information: full citation, abstract, referer

Bibliometrics: Downloads (6 Weeks): 14, Downloads (12 Months): 87, Citatior

Even with the significant focus on IP address lookup in the published lite focus on this market by commercial semiconductor vendors, there is sti router architects to find solutions that simultaneously meet 3 criteria: ..

Result page: